

PESTICIDE USAGE LEGISLATION AND GROUNDWATER QUALITY

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Contamination of groundwater continues to gain increased attention due to numerous discoveries of hazardous waste materials and the identification of toxic chemicals in water supplies. Although much of the reported contamination involves spills and point source pollution, additional nonpoint sources including agricultural production contribute to the problem. The threat of liability for injuries from the contamination of groundwater by agricultural producers who apply pesticides to their crops has led the American Farm Bureau Federation to advance exemption legislation. This legislation would exempt producers from liability for their contamination so long as they were not negligent, reckless, or misusing a chemical.

This paper addresses groundwater contamination liability legislation, including new legislation passed in Georgia in 1988, and factors that contribute to a fair and efficient apportionment of liability for damages from agricultural producers using pesticides. Economic models of strict liability and negligence are contrasted to demonstrate the impact of the new exemption legislation. These models are related to four major sets of rules for responding to groundwater contamination under American law: entitlements, property rules, liability rules, and inalienability rules.

Notwithstanding the fact that it is difficult to delineate a preferred response for all types of pollution, the model and factors concerning groundwater contamination suggest that improvements in efficiency can be achieved through changes of existing liability legislation. In the absence of unilateral precaution, the strict liability rules in effect for groundwater contamination in many U.S. states may not offer a very efficient solution. Rather, a liability rule based on negligence may be preferable. Comparative negligence may minimize evidentiary uncertainty and respond to risk aversion, although this depends on the symmetry of precaution. The cheapest cost avoider may impact what type of negligence solution is superior.

However, it is not clear that the adoption of exemptions for producers' pesticide usage are premised on social welfare or efficiency justifications. Any possible enhancement of efficiency between producers and victims may be negated by social losses. Moreover, the legislation does nothing to respond to the growing concern about groundwater contamination. Legislatures that desire to provide a better resolution for damages

from pesticide usage contamination should consider alternative solutions rather than rely on liability rules. Modifications of entitlements to incorporate pollution charges or marketable water pollution rights may offer superior mechanisms to provide economic incentives to reduce contamination.

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